

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)							June 2001				
BUDGET ACTIVITY 5 - ENG MANUFACTURING DEV				PE NUMBER AND TITLE 0604823A - FIREFINDER					PROJECT L85		
COST (In Thousands)		FY 2000 Actual	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete	Total Cost
L85	FIREFINDER AN/TPQ-47	38797	46928	26956	0	0	0	0	0	0	0
<p><b><u>A. Mission Description and Budget Item Justification:</u></b></p> <p><b><u>PLEASE NOTE:</u></b> This administration has not addressed FY2003-2007 requirements. All FY 2003-2007 budget estimates included in this book are notional only and subject to change.</p> <p>The Firefinder AN/TPQ-47 will replace the AN/TPQ-37 Artillery Locating Radar. This program is in response to the approved Mission Need Statement (MNS) for the Advanced Firefinder System which describes an urgent need for a longer range and less manpower intensive radar. An Operational Requirements Document (ORD) for the Firefinder AN/TPQ-47 was approved 25 Sep 96. The Firefinder AN/TPQ-47 will double the current artillery range performance out to 60km and improve the target throughput up to 50 targets per minute in a highly mobile, transportable and survivable system. The Firefinder AN/TPQ-47 will provide a new capability of missile and rocket detection at ranges of 150-300 km and will be capable of alerting Theater Missile Defense Systems. The system will be capable of C-130 roll-on/roll-off transportability for rapid deployment. Crew size will be reduced from 12 to 9. This program will leverage off the AN/TPQ-36(V)8 Electronics Upgrade program by using the same man-machine interface. The Firefinder AN/TPQ-47 will be integrated into the Army Tactical Command and Control System (ATCCS) by interfacing with the Advanced Field Artillery Tactical Data System (AFATDS).</p> <p>This system supports the Legacy to Objective (LO) transition path of the Transformation Campaign Plan (TCP).</p> <p><b><u>FY 2000 Accomplishments</u></b></p> <ul style="list-style-type: none"><li>2753 Continued development of the Radar Environmental Simulator System (RESS) and simulation efforts to develop target and clutter models and incorporate Firefinder into Tactical Ballistic Missile (TBM) simulations</li><li>2252 Initiated development to provide early warning and cueing of TBMs</li><li>7306 Continued development of Joint Technical Architecture - Army (JTA-A) compliant operational software design, coding and unit test</li><li>9491 Completed detailed system design and conducted Critical Design Review (CDR)</li><li>6736 Continued development and manufacture of Power Amplifier Modules and Sub Array Modules for System 1</li><li>9696 Began build of System #1</li><li>563 Developed logistics support strategy to include Interactive Electronic Technical Manuals (IETMs)</li></ul> <p>Total 38797</p>											

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**L85****FY 2001 Planned Program**

- 2751 Continue development and Validation & Verification (V&V) of the RESS modeling and other simulations
- 14500 Complete build of System #1 and begin integration and contractor test
- 5411 Complete development and manufacture of Power Amplifier Modules and Sub Array Modules for System 2
- 1911 Begin build of System #2
- 11828 Complete development of JTA-A compliant operational software design, coding and unit test
- 9145 Complete development to provide early warning and cueing on TBMs
- 1382 Small Business Innovative Research/Small Business Technology Transfer Programs (SBIR/STTR)

Total 46928

**FY 2002 Planned Program**

- 225 Complete development and V&V of the RESS modelling and other simulations
- 3326 Complete integration and contractor test of System #1
- 18764 Continue build/integration and contractor test of System #2
- 4641 Begin Government Live Ammunition/Verification Testing

Total 26956

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<b><u>B. Program Change Summary</u></b>	FY 2000	FY 2001	FY 2002	FY 2003
Previous President's Budget (FY2001 PB)	32353	37363	26838	0
Appropriated Value	40253	47363	0	0
Adjustments to Appropriated Value	0	0	0	0
a. Congressional General Reductions	0	0	0	0
b. SBIR / STTR	-1063	0	0	0
c. Omnibus or Other Above Threshold Reduction	-163	0	0	0
d. Below Threshold Reprogramming	0	0	0	0
e. Rescissions	-230	-435	0	0
Adjustments to Budget Years Since FY2001 PB	0	0	118	0
Current Budget Submit (FY 2002/2003 PB )	38797	46928	26956	0

FY02/03: Fund increases due to a re-baseline of the program that extended the RDT&E effort an additional year.

<b><u>C. Other Program Funding Summary</u></b>	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	To Compl	Total Cost
SSN: BA5100 Firefinder AN/TPQ-47	0	0	0	0	0	0	0	0	0	0

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**D. Acquisition Strategy:** The original program had a streamlined acquisition strategy. The strategy was to develop three (3) production representative systems in EMD and go directly to a Milestone III Decision and Full Production. The program strategy has been revised to reduce the overall program risk. The FY04 production buy will be a Low Rate Initial Production (LRIP) buy, and those systems will be used to support an Initial Operational Test and Evaluation (IOTE) prior to a full production decision.

<u>E. Schedule Profile</u>	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Complete detailed system design and conduct CDR	1-3Q			0	0	0	0	0
Develop and conduct V&V of the RESS	1-4Q	1-4Q	1-3Q	0	0	0	0	0
Develop, code and test JTA-A compliant operational software	3-4Q	1-4Q		0	0	0	0	0
Develop capability to provide early warning and cueing on TBMs	3-4Q	1-4Q		0	0	0	0	0
Fabricate, integrate and conduct contractor test of System #1	3-4Q	1-4Q	1-3Q	0	0	0	0	0
Fabricate, integrate and conduct contractor test of System #2		4Q	1-4Q	0	0	0	0	0
Develop Training Devices				0	0	0	0	0
Conduct Live Ammunition/Verification Test			4Q	0	0	0	0	0
Conduct Limited User Test				0	0	0	0	0
Milestone C for LRIP				0	0	0	0	0
Award LRIP Contract				0	0	0	0	0

ARMY RDT&E COST ANALYSIS(R-3)									June 2001			
BUDGET ACTIVITY <b>5 - ENG MANUFACTURING DEV</b>					PE NUMBER AND TITLE <b>0604823A - FIREFINDER</b>					PROJECT <b>L85</b>		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Primary Hardware Dev	C/CPIF	Raytheon Sys, CA/MS	50971	39340	1-4Q	21700	1-4Q	0	0	0	0	0
b . Ancillary Hardware Dev	TBD	Various	3188	1515	1-2Q	968	1-2Q	0	0	0	0	0
c . Trainers Dev	SS/TBD	Raytheon Sys, CA/MS	0	0		0		0	0	0	0	0
d . Sys Engrg (Contractor)	C/FP	Various	2042	1112	2Q	206	2Q	0	0	0	0	0
e . Sys Engrg (Government)	MIPR	Various	1337	749	1-2Q	462	1-2Q	0	0	0	0	0
f . Software Engineering	C/FP	Telos, OK	799	558	1-2Q	341	1-2Q	0	0	0	0	0
g . SSEB	MIPR	Various	227	0		0		0	0	0	0	0
Subtotal:			58564	43274		23677		0		0	0	0
Remarks: Primary Hardware Development: These costs include the basic contract, Sub Array Modules re-design effort and TBM development effort. As part of the basic contract terms, Raytheon Systems invested \$16.4M in FY98/99.												

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II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Development Support - Government	MIPR	Various	649	187	1-2Q	207	1-2Q	0	0	0	0	0
b . Integrated Logistics Spt (ILS) - Contractor	TBD	Various	174	210	2Q	126	2Q	0	0	0	0	0
c . ILS Support-Government	MIPR	CECOM, Fort Monmouth, NJ	308	55	2Q	126	2Q	0	0	0	0	0
d . Configuration Mgmt Spt-Government	MIPR	CECOM, Fort Monmouth, NJ	242	129	1Q	133	1Q	0	0	0	0	0
Subtotal:			1373	581		592		0		0	0	0

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III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Development Test & Evaluation (DT&E)	MIPR	Yuma, AZ WSMR, NM	0	70	2Q	1050	2Q	0	0	0	0	0
b . Verification Testing	MIPR	Various	0	0		0		0	0	0	0	0
c . Test Support	MIPR	Various	734	150	1-3Q	150	1-2Q	0	0	0	0	0
Subtotal:			734	220		1200		0		0	0	0
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Program Management - Contractor	C/FP	Various	964	378	1-2Q	483	1-2Q	0	0	0	0	0
b . Program Management - Government	MIPR	CECOM, Fort Monmouth, NJ	298	125	1Q	129	1Q	0	0	0	0	0
c . Product Manager Office - Internal Support		CECOM, Fort Monmouth, NJ	1295	968	1-4Q	875	1-4Q	0	0	0	0	0
d . SBIR/STTR			0	1382		0		0	0	0	0	0

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IV. Management Services (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
			2557	2853		1487		0		0	0	0
Subtotal:												
Project Total Cost:			63228	46928		26956		0		0	0	0